REMARKS

The Specification

Applicant has checked the specification and found some English grammar mistakes and informalities in the drafting. Applicant has corrected the mistakes accordingly. These amendments do not add any mew matter. A marked up version of the substitute specification is provided above, and a clean version of the substitute specification is attached hereto.

The Abstract

The abstract is amended according to the specification and claims as amended.

The Drawings

Applicant found informalities regarding FIG. 3 and FIG. 4 on the second sheet of the drawings. The replacement sheet submitted herewith does not add any mew matter.

Claim Rejections 35 U.S.C. 103

I. Response to rejection of claims 1, 9-15 and 19 under 35 U.S.C. 103(a)

Claims 1, 9-15, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seki (JP 406235823A) in view of Suga et al. (US 6,445,504 B1) and Taniguchi et al. (US 6,700,634 B2).

In order to overcome the rejection, applicant has amended claims 1, 15 and 19. The references cited disclose structures different from that of the instant invention as claimed. Seki discloses a planar surface illuminator including a light source having a fluorescent lamp positioned adjacent to a light guide plate, and the light guide plate having a plurality of dots (10) formed on a bottom surface thereof.

All the dots are made of light emitting material consisting of acryl binder and fluorescent pigment, whereas in the instant invention only some dots at shortfall areas are made of or coated with melamine-based fluorescent particles. Suga teaches **a light diffusing plate made of melamine-based acrylate, but does not disclose a light guide plate having dots on one surface, with the dots being made of or coated with melamine-based fluorescent particles.**

Of course, Taniguchi uses LEDs as light sources, but in fact, provides no teaching about any relationship between the LEDs and the scattering dots for the purposes of ensuring uniform brightness of the planar surface illuminator, and provides no teaching about how to remedy shortfall areas in the light guide plate produced because of using LEDs as light sources. In other words, there is no suggestion in the cited references that a planar surface illuminator can provide some dots made of or coated with melamine-based fluorescent particles positioned at some shortfall areas in a light guide plate between each two adjacent light emitting diodes, the dots functioning as small light sources lighting the shortfall areas, in order to attain even brightness for a liquid crystal display. Similarly, there is no suggestion in the cited references that a planar surface illuminator have only some of dots thereof, which are essentially located in shortfall areas, equipped with fluorescent particles, whereby uniform emission is obtained on a top face of a light guide plate.

Furthermore, the references cite problems different than those addressed by the instant invention. Seki provides a number of dots on a bottom surface of a light guide plate, with all the dots being made of light emitting material consisting of acryl binder and fluorescent pigment, for effectively utilizing a light source and the quantity of light provided. Differently, the instant invention utilizes dots made of or coated with melamine-based fluorescent particles positioned at the shortfall areas of the light guide plate, the dots functioning as small light sources lighting the shortfall areas for providing even brightness to the liquid crystal display.

Moreover, Suga apparently does not teach LEDs, but rather a linear light

source. One having ordinary skill in the art would know that LEDs and fluorescent lamps are substantially different light sources, with the former providing Gaussian light beams and the latter providing substantially linear light beams. Using an LED or a fluorescent lamp as the light source has a substantial bearing on the optical design and dot design of a light guide plate. The results and objects achieved may be significantly different.

In summary, there is nothing in the cited references, alone or in combination, that would have taught or suggested to one of ordinary skill in the art that they might or should provide the planar surface illuminator of presently amended claims 1, 15 and 19. These claims are submitted to be unobvious and patentable over Seki in view of Suga et al. and Taniguchi et al. Reconsideration and withdrawal of the rejection and allowance of these claims are respectfully requested.

Accordingly, the dependent claims 9-11 and the newly added dependent claims 20-21 should also be allowable.

II. Response to rejection of claims 2-8 and 16-18 under 35 U.S.C. 103(a)

Claims 2-8 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seki, Taniguchi, and Suga as applied to claims 1 and 15 above, and further in view of Kaminski et al. (US 2003/0214718 A1). Applicant's standpoint on the teachings of Seki, Taniguchi and Suga has been discussed above. Regarding claims 2-8 and 16-18, Seki does not disclose the color of the fluorescent particles. However, Kaminski teaches that a diffuse reflector comprises a colored element to produce colored reflection (paragraph [0091]). Further, the colored reflection can be green at 525 to 590 nm, red at 630 to 690 nm and yellow at 570 to 620 nm (paragraph [0094]).

Applicant urges reconsideration. Claims 2-8 and 16-18 should be allowable as being dependent on allowable claims 1 and 15 respectively, as asserted above. If further argument is needed, Kaminski teaches that a diffuse reflector comprises a colored element not being a dot on a light guide plate, and that the colored reflection can be green at 525 to 590 nm, red at 630 to 690 nm and yellow at 570 to 620 nm. Kaminski does not teach dots made of polymerized dyes with melamine

particles, of which: green fluorescent dye has excitation and emission wavelengths of 506 and 529 nanometers, red fluorescent dye has excitation and emission wavelengths of 636 and 686 nanometers, orange fluorescent dye has excitation and emission wavelengths of about 560 and 584 nanometers; or wherein a mixture of green, red and orange fluorescent dyes is provided. There is no suggestion in the cited references of the above-described limitations of the instant invention.

Accordingly, claims 2-8 and 16-18 are submitted to be unobvious and patentable over Seki, Taniguchi et al. and Suga et al., and further in view of Kaminski et al. Reconsideration and withdrawal of the rejection and allowance of these claims are respectfully requested.

In view of the above remarks, the subject application is believed to be in a condition for allowance, and an action to such effect is earnestly solicited.

Respectfully submitted,
LEU ET AL.

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